WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a lower buried oxide film disposed on a semiconductor substrate;

a stress-relief film disposed on the lower buried oxide film;

an upper buried oxide film disposed on the stress-relief film; and

an SOI film disposed on the upper buried oxide film,

wherein the SOI film is formed with a MOSFET having a source, a drain, and a channel, and

a thermal expansion coefficient of the stress-relief film is greater than a thermal expansion coefficient of the upper buried oxide film.

2. The semiconductor device according to claim 1, wherein the stress-relief film is formed of a silicon film.

3. The semiconductor device according to claim 2, wherein the silicon film is formed of a crystal film, polycrystal film, or amorphous film, and the silicon film is a non-doped silicon film.

4. The semiconductor device according to claim 1, wherein the upper buried oxide film has almost a same film thickness as that of the SOI film, and the lower buried oxide film is thicker than the upper buried oxide film.

5. The semiconductor device according to claim 1, wherein

the stress-relief film is formed of a composite film laminating a first silicon film, a germanium film disposed on the first silicon film, and a second silicon film disposed on the germanium film.

6. The semiconductor device according to claim 5, wherein the first and second silicon films of the composite film are formed of a crystal film, polycrystal film, or amorphous film, and the silicon film is a non-doped silicon film.

7. The semiconductor device according to claim 5, wherein the first and second silicon films of the composite film are thinner than the germanium film of the composite film.

8. The semiconductor device according to claim 1, wherein the thermal expansion coefficient of the stress-relief film is nearly equal to or greater than a thermal expansion coefficient of the SOI film.

9. A semiconductor device comprising:

an insulating layer;

a semiconductor layer disposed on the insulating layer; and

a semiconductor element formed in the semiconductor layer,

wherein a stress-relief layer having a thermal expansion coefficient greater than a thermal expansion coefficient of the insulating layer is disposed at a position apart from a top of the insulating film contacting with the semiconductor

layer, and

the semiconductor layer and the stress-relief layer are disposed as a part of the insulating layer is interposed therebetween.

10. The semiconductor device according to claim 9, wherein a film thickness of the insulating layer interposed between the semiconductor layer and the stress-relief layer is almost the same as a film thickness of the semiconductor layer.

11. The semiconductor device according to claim 9, wherein the thermal expansion coefficient of the stress-relief layer is nearly equal to or greater than a thermal expansion coefficient of the semiconductor layer.

12. The semiconductor device according to claim 11, wherein the semiconductor layer and the stress-relief layer are formed of a same material.

13. The semiconductor device according to claim 12, wherein the semiconductor layer and the stress-relief layer are formed of a silicon film.

14. The semiconductor device according to claim 13, wherein the silicon film is any one of a non-doped single crystal silicon film, non-doped polysilicon film, or non-doped amorphous silicon film.

15. The semiconductor device according to claim 9, wherein the stress-relief layer includes a germanium film.

16. The semiconductor device according to claim 15, wherein

the stress-relief layer is configured of a composite film formed of the germanium film, a first silicon film disposed on the germanium film and contacting with the semiconductor layer, and a second silicon film disposed below the germanium film.